I claim:

1. A unpolarized beam splitter (UBS) comprising an internal beam-splitting coating that is approximately symmetrical.

2. The UBS of claim 1, wherein said coating is designed such that $\Psi_{SR} - \Psi_{SR'} = \Psi_{PR} - \Psi_{PR'}$.

3. The UBS of claim 1, wherein said UBS is operatively located in an optical interleaver and is therein configured to separate an incident beam of light into a first beam of light and a second beam of light.

4. The UBS of claim 3, wherein the phase difference between said first beam and said second beam is independent of the polarization status of said incident beam.

5. The UBS of claim 4, wherein said optical interleaver further comprises a reflector operatively positioned to reflect said first beam of light to produce a first reflected beam; and a non-linear phase generator (NLPG) operatively positioned to reflect said second beam of light to produce a second reflected beam, wherein said first reflected beam and said second reflected beam interfere with one another, wherein the frequency dependence of the phase difference between said first reflected beam and said second reflected beam has a step-like function.

6. The UBS of claim 1, wherein said coating is designed to approximate the condition such that $\Psi_{SR} - \Psi_{SR'} = \Psi_{PR} - \Psi_{PR'}$.

7. The UBS of claim 1, wherein said UBS is operatively located in an interferometer and is therein configured to separate an incident beam of light into a first beam of light and a second beam of light.

8. The UBS of claim 7, wherein the phase difference between said first beam and said second beam is independent of the polarization status of said incident beam.

9. A unpolarized beamsplitter (UBS) comprising an internal beam-splitting coating having a structure that looks about the same to a beam propagating through it from either side of said coating.

10. The UBS of claim 9, wherein said coating is configured to produce a phase matching condition such that $\Psi_{SR} - \Psi_{SR'}$ is about equal to $\Psi_{PR} - \Psi_{PR'}$ is about equal to zero.